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EXAMINER	
ULM, J	
ART UNIT	PAPER NUMBER
1812	12

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Below is a communication from the EXAMINER in charge of this application

COMMISSIONER OF PATENTS AND TRADEMARKS

ADVISORY ACTION

☒ THE PERIOD FOR RESPONSE:

a) ☒ is extended to run 5 mos. or continues to run _____ from the date of the final rejection

b) ☐ expires three months from the date of the final rejection or as of the mailing date of this Advisory Action, whichever is later. In no event however, will the statutory period for the response expire later than six months from the date of the final rejection.

Any extension of time must be obtained by filing a petition under 37 CFR 1.136(a), the proposed response and the appropriate fee. The date on which the response, the petition , and the fee have been filed is the date of the response and also the date for the purposes of determining the period of extension and the corresponding amount of the fee. Any extension fee pursuant to 37 CFR 1.17 will be calculated from the date of the originally set shortened statutory period for response or as set forth in b) above.

☐ Appellant's Brief is due in accordance with 37 CFR 1.192(a).

☒ Applicant's response to the final rejection, filed 4/28/92 has been considered with the following effect, but it is not deemed to place the application in condition for allowance:

1. ☐ The proposed amendments to the claim and /or specification will not be entered and the final rejection stands because:

   a. ☐ There is no convincing showing under 37 CFR 1.116(b) why the proposed amendment is necessary and was not earlier presented.

   b. ☐ They raise new issues that would require further consideration and/or search. (See Note).

   c. ☐ They raise the issue of new matter. (See Note).

   d. ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal.

   e. ☐ They present additional claims without cancelling a corresponding number of finally rejected claims.

   NOTE: _____

2. ☐ Newly proposed or amended claims _____ would be allowed if submitted in a separately filed amendment cancelling the non-allowable claims.

3. ☒ Upon the filing an appeal, the proposed amendment ☒ will be entered ☐ will not be entered and the status of the claims will be as follows:

   Claims allowed: None
   Claims objected to: None
   Claims rejected: 17,18,32,35,42,43,45-53.

   However;

   ☐ Applicant's response has overcome the following rejection(s): _____

4. ☐ The affidavit, exhibit or request for reconsideration has been considered but does not overcome the rejection because _____

5. ☐ The affidavit or exhibit will not be considered because applicant has not shown good and sufficent reasons why it was not earlier presented.

☐ The proposed drawing correction ☐ has ☐ has not been approved by the examiner.

☐ Other

THE PERIOD FOR RESPONSE IS EXTENDED TO RUN FIVE MONTHS FROM THE DATE OF THE FINAL REJECTION. Any extension of time must be obtained by filing a petition under 37 C.F.R. § 1.136(a) accompanied by the proposed response and the appropriate fee. The date on which the response, the petition, and the fee have been filed is the date of the response and also the date for the purposes of determining the period of extension and the corresponding amount of the fee.

The amendment filed under 37 C.F.R. § 1.116 in response to the final rejection will be entered upon the filing of an appeal, but is not deemed to place the application in condition for allowance. Upon the filing of an appeal and entry of the amendment, the status of the claims would be as follows:

Allowed claims: NONE

Rejected claims: 17, 18, 32, 35, 42, 43, and 45 to 53.

Claims objected to: NONE

Claims 10 to 53 are pending in the instant application. Claims 10 to 16, 19 to 22, 24 to 31, 34, 36 to 41, and 44 stand withdrawn from further consideration by the examiner, 37 C.F.R. § 1.142(b), as being drawn to a non-elected invention, the requirement having been traversed in Paper No. 8.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 23, 32, 33, 35, 42, 43, 45, 48, 51, 52, and 53 stand rejected under 35 U.S.C. § 112, first paragraph, for the reasons

of record. The instant disclosure provides a single example of the isolation of a single DNA encoding a 2,4-D monooxygenase from a single organism in which this DNA was known in the prior art to be plasmid encoded. This single example describes the isolation of a plasmid encoded gene from one gram negative bacteria by cloning that gene into another gram negative bacteria followed by detection of a functional gene product. This limited disclosure certainly does not describe the isolation of a DNA encoding a 2,4-D monooxygenase from a non-bacterial host which would not be expected to be functionally expressed in the disclosed host and whose isolation would therefore not be enabled by the instant specification.

Claims 18, 35, and 46 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 18 and 35 are incorrect in that they both depend from canceled claims. Entry of Applicant,s amendment will negate this rejection.

Claim 46 is indefinite in claiming "a sequence hybridizable therewith" which places no functional or size limits on said DNA and is inherently indefinite. Applicant's proposed amendment will negate only part of this rejection. This claim will remain indefinite because the conditions of hybridization are not specified even though these conditions constitute a critical

limitation of such a claim.

Claims 17, 18, 32, 35, 42, 43, and 45 to 53 stand rejected under 35 U.S.C. § 103 as unpatentable over the Amy et.al., Beguin et.al., and Carey et.al. references in view of the Comai et.al. reference for reasons of record.

The Amy et.al. reference makes obvious the isolation of a DNA encoding a 2,4-D monooxygenase from a aquatic bacteria, and the Beguin et.al. and Carey et.al. references have been used to exemplify those methods that were routinely used in the art at the time of the instant invention to further characterize such a cloned gene and its encoded product. Applicant does not appear to dispute the obviousness of an isolated DNA encoding a 2,4-D monooxygenase and the declaration filed by Wolfgang R. Streber under 37 C.F.R. § 1.132 does not address this issue.

The issue in dispute is whether or not the incorporation of such a DNA into a plant is made obvious by the Comai et.al. publication. Comai et.al. describes the isolation of a bacterial gene and its subsequent insertion into and expression in a plant. This reference clearly shows that the successful expression of a bacterial gene in a plant was known in the prior art. The fact that the bacterial gene described in the Comai reference has a host cell homologue is not relevant since ~~the~~ that homologue is not structurally related to the bacterial gene or its product. An artisan would certainly not expect the functional expression of the tobacco aroA homologous gene in a Salmonella typhimurium

host simply because that host has a functionally homologous gene. This is why the presence of a host cell homologue of a heterologous gene can not be used as an indication of whether the heterologous gene can be successfully expressed in that host absent evidence of structural relatedness. One of ordinary skill wishing to predict the probably of obtaining the expression of a gene from a specific source organism in a specific heterologous host organism would depend upon the prior art applicable to the particular source/host system as a guide. In the instant case, an artisan would have known that a structural gene from a gram negative bacterial source had been successfully expressed in a plant system prior to the time of the instant invention and would have reasonably expected that other bacterial genes could also be expressed in plants.

The argument that one could not predict if a plant would be protected from the 2,4-dichlorophenol that is produced from 2,4-dichlorophenoxyacetic acid by the product of the claimed gene is not persuasive. An artisan would have known that the 2,4-dichlorophenol is less toxic to a host plant than 2,4-dichlorophenoxyacetic acid and therefore would have expected the presence of the claimed gene product to increase the tolerance of a susceptible host cell for 2,4-dichlorophenoxyacetic acid.

The declaration under 37 C.F.R. § 1.132 filed 28 April of 1992 is insufficient to overcome the rejection of claims 17, 18, 32, 35, 42, 43, and 45 to 53 based upon the Comai et.al.

publication as set forth in the last Office action for the reasons given above.

Any inquiry concerning this communication should be directed to John D. Ulm at telephone number (703) 308-4008.

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DAVID L. LACEY
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GROUP 180
5/21/92